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Bradysia novalobata, a new South African species in the *Bradysia rufescens*-group (Diptera: Nematocera: Sciaridae)

by

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ABSTRACT

A new sciarid species, *Bradysia novalobata*, is described from South Africa (KwaZulu-Natal, Giants Castle Reserve). It is a remarkable member of the *Bradysia rufescens*-group, and is characterised by an extraordinarily tripartite basal lobe of the gonocoxites and the apical pilosity on the tegmen. A new combination is recognised for *Sciara schultzei* Rübsaamen, 1908, which is transferred to the *Bradysia rufescens*-group, of which it is the second known southern African species.

INTRODUCTION

In the Catalogue of the Diptera of the Afrotropical Region (Steffan 1980), 11 species of *Bradysia* Winnertz, 1867 are recorded from Zaïre and Kenya. Up to now the *Bradysia rufescens* species-group was represented only by the characteristic species *Bradysia rufescens* (Zetterstedt, 1852), which was recorded from western Europe and Kenya (Steffan 1980). The taxonomic status of all other afrotropical species of *Bradysia*, which were described by Lengersdorf (1938 1939) from Zaïre, can only be established by examination of the type material.

Rübsaamen (1908) described *Sciara schultzei* from South Africa (Steinkopf, Klein-Namalande). According to the characters mentioned by Rübsaamen in his original description, *Sciara schultzei* is now transferred to the *Bradysia rufescens* species-group.

While studying the Natal Museum collection of Sciaridae, a new and remarkable species of the *Bradysia rufescens* species-group was discovered. This species is described, illustrations of the male genitalia are made, and a discussion of its systematic position is given.

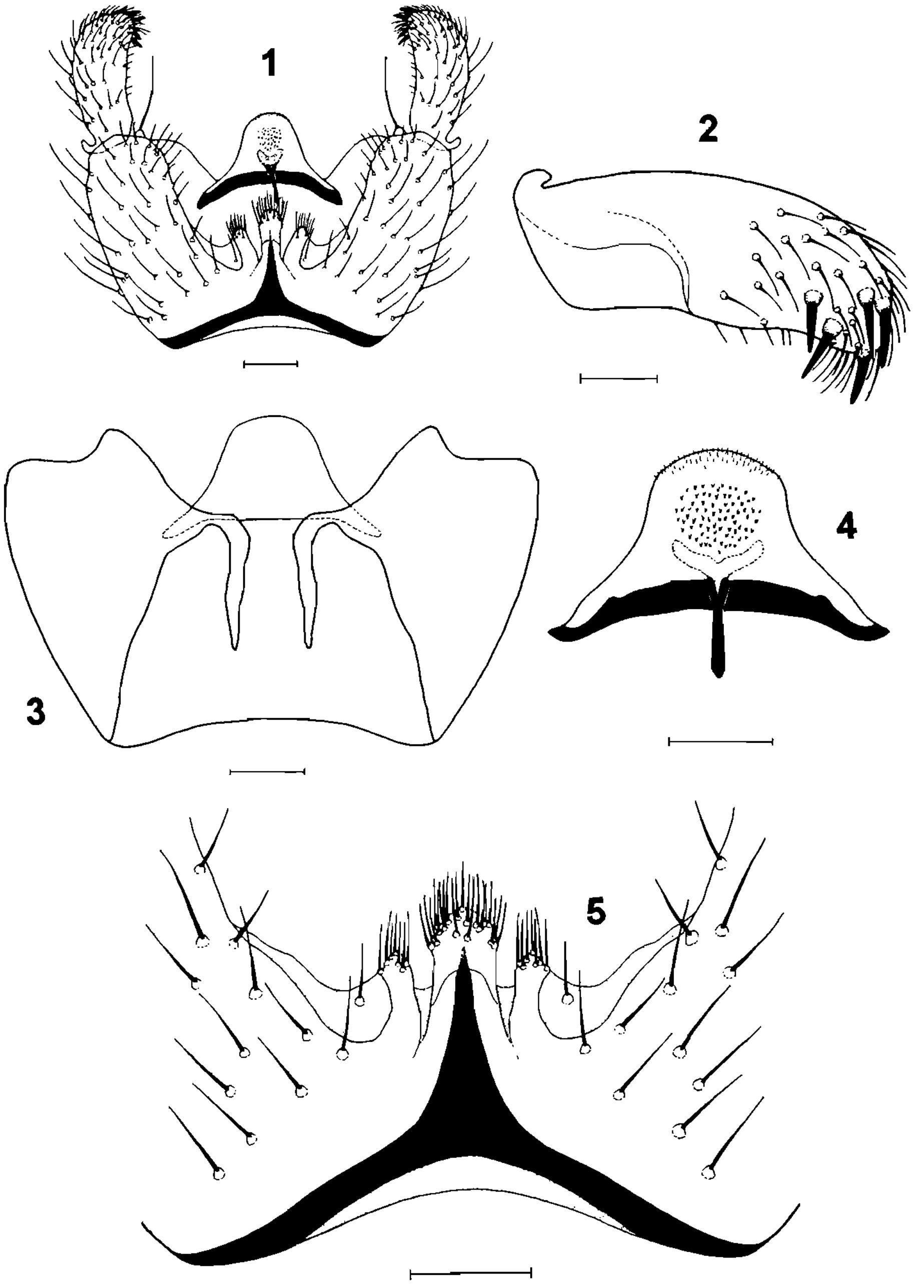
Terminology essentially follows Steffan (1966) and Freeman (1983). The type material of *Bradysia novalobata* sp. n. is mounted on permanent microscope slides in Polyvinyl-Lactophenol and deposited in the Natal Museum, Pietermaritzburg.

TAXONOMY

Bradysia novalobata sp. n.

Figs 1–7

Material examined: Holotype ♂: South Africa, 14.xi.1963, Natal, Giants Castle Reserve, 2000 m; leg. Haeselbarth Präp.-Nr.: NMC/14, Natal Museum, Pietermaritzburg. Paratype ♂, same data. Präp.-Nr.: NMC/48, Natal Museum, Pietermaritzburg.



Figs 1–5. Structures of *Bradysia novalobata* sp. n. 1. Hypopygium, ventral view. 2. Gonostylus, dorsal view. 3. Gonocoxites with dorsal apodemes. 4. Tegmen. 5. Base of gonocoxites with basal lobes. [Scale = 30 μm (Fig. 2), others 60 μm].

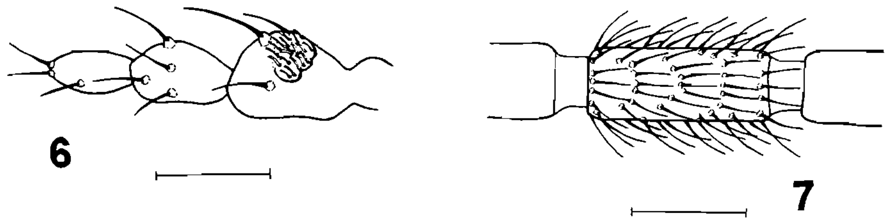
Male:

Head: Eye bridge 3 facets wide. Prefrons with about 20 setae, the lower setae long. Clypeus bare. Maxillary palp dark brown, three-segmented; basal segment thickened, with 1 long dorsolateral and 2 shorter dorsal setae, sensory pit proximally bordered; second segment with 1 long and 3 short setae. Length of palpal segments = 70 : 54 : 40 mm. Antenna with fourth flagellar segment 2.7 times as long as wide; necks of segments distinct, unicoloured. Antennal segments with pale hairs, a little shorter than diameter of segments.

Thorax: Dark brown; mesonotum only with short brown bristles. Halteres brown. Coxae and legs brownish, somewhat paler than thorax. Setae of coxae dark brown. Front tibia with well defined comb composed of 7–8 pale bristles. Tarsal claws not toothed.

Wings: Pale brownish; anal lobe much reduced. C/w = 0.65. R_1/R = 0.6. Vein r-m = 1.5 X base of M, distally with 1–2 dorsal setae. Length of stCu = r-m. Medial fork distinctly divergent in apical half, subequal in length to its stem. R_{4+5} remarkably straight, ending in C opposite apex of M_2. Wing length = 1.40 mm, wing width = 0.45 mm.

Abdomen: Dark brown, short haired. Tergum IX of trapezoid shape. Hypopygium with inner sides of gonocoxites short haired. Ventral base of gonocoxites with tripartite basal lobe. Median lobe with about 20–25 setae, lateral lobes with about 7–9 setae. Most setae situated apically on lobes. Basal sclerotisation of gonocoxites ventrally with a median process into median basal lobe. Dorsal apodemes of gonocoxites slender, longer than the length of tegmen. Tegmen of pyramidal shape, broader than long, apically rounded, and with very fine microtrichia; in the middle with rounded area of solitary fine teeth. Basal arms of tegmen strongly sclerotised. Aedeagus short but with distinct apical fork. Gonostyles about 0.6 X length of gonocoxites; about 2.6 X longer than wide, apically rounded and with profuse short bristly hairs. Styles without an outstanding apical spine but with 5 apical-subapical spines on dorso-medial surface.



Figs 6–7. Structures of *Bradysia novalobata* sp. n. 6. Maxillary palp. 7. Fourth flagellar segment of antenna. [Scale = 60 μm].

Body length = 2.0 mm.

Female: Unknown.

Remarks: The new species belongs to the *Bradysia rufescens* species-group as defined by Mohrig *et al.* (1989). *Bradysia novalobata* sp. n. seems to be related to *B. bilobata* Mohrig & Kozanek, 1992, which has similarly shaped gonostyles; it is recognised by the structure of the tegmen and the tripartite basal lobe of the gonocoxites, which in *B. bilobata* is only bipartite.

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